SHORELINES HEARINGS BOARD
STATE OF WASHINGTON

CINDY MORGAN, DEAN and DELVERNA SWANSON, JIM and COLEEN MORRIS, RAFAEL and DANETTE BEJINEZ, and SCOTT ROSE, Petitioners, v. CLARK COUNTY; J.L. STOREDAHL & SONS, INC.; and STATE OF WASHINGTON, DEPARTMENT OF ECOLOGY, Respondents.	SHB NO. 05-008 FINDINGS OF FACT, CONCLUSIONS OF LAW, AND ORDER
FRIENDS OF THE EAST FORK and FISH FIRST, Petitioners, v. CLARK COUNTY; J.L. STOREDAHL & SONS, INC.; and STATE OF WASHINGTON, DEPARTMENT OF ECOLOGY, Respondents.	SHB NO. 05-009

Cindy Morgan, Dean and Delverna Swanson, Jim and Coleen Morris, Rafael and Denette Bejinez, and Scott Rose ("Cindy Morgan, et al.") filed a petition for review with the Shorelines Hearings Board ("Board") challenging the grant by the Department of Ecology ("Ecology") of a shorelines substantial development permit for the proposed expansion of the Daybreak Gravel Mine near the East Fork of the Lewis River in Clark County by J.L. Storedahl & Sons, Inc. ("Storedahl").

Friends of the East Fork and Fish First ("FOEF/FF") also challenged Ecology's approval of the permit. In its pre-hearing order, the Presiding Officer consolidated the cases and, in consultation with the parties, identified the issues as follows:

> As conditioned by the Clark County Land Use Examiner's Final Order dated November 4, 2004, in Findings #40 through #68, does Storedahl & Sons, Inc.'s application for a conditional use permit for the specific accessory operations related to their mining operation at Daybreak Mine meet the requirements for the issuance of a conditional permit as set forth in WAC 173-27-160, WAC 173-27-180, WAC 173-27-200, and WAC 173-27-210; the policies of the Shoreline Management Act as set forth in RCW 90.59.020, and the Clark County Shoreline Master Program, particularly with regard to the following:
>
> (a) avulsion,
> (b) water temperature,
> (c) water quality,
> (d) water quantity,
> (e) whether the permit was improvidently granted, and
> (f) whether a shoreline conditional use permit is required for the entirety of the site?

On May 26, 2003, Respondent Storedahl filed a motion to dismiss the case, arguing that Petitioners failed to perfect their petitions. The Board denied this motion in a written opinion issued July 18, 2005. On July 15, 2005, Petitioners Morgan et al. filed a motion to dismiss the case on jurisdictional grounds, arguing that the County had not issued a final shoreline permit. On July 22, 2005, Petitioners FOEF/FF submitted a "Motion to Invalidate Permit, or in the Alternative, to Rescind," raising similar arguments. The Board denied these motions in a written opinion issued August 1, 2005, and in doing so, resolved issue (e) – i.e., whether the permit was improvidently granted – against Petitioners on summary judgment. FOEF/FF raised these arguments anew in its hearing brief submitted August 8, 2005. In a pre-hearing conference August 10, 2005, the Presiding Officer stated that the Board would construe the brief as a

memorandum in support of a motion for reconsideration. The Board heard oral argument on the motion prior to hearing on the case-in- chief on August 15, 2005, and issued a written decision denying reconsideration on September 15, 2005.

The Board, comprised of David W. Danner (Presiding), Chairman Bill Clarke, and members William H. Lynch, Judy Wilson, Judy Barbour, and Kevin Ranker, heard the case in Woodland, Washington, on August 15 and 16, 2005, and in Lacey, Washington, on August 17 and 18, 2005.[1] Cindy Morgan appeared on behalf of the *pro se* appellants, assisted by Attorney David T. McDonald during a portion of the hearing. Attorneys Alexander "Sandy" Mackie and John Dentler appeared on behalf of Respondent Storedahl. Assistant Attorney General Colleen Warren appeared on behalf of Ecology. Respondent Clark County did not appear or otherwise participate in the hearing. Kim Otis of Gene Barker & Associates provided court reporting services on August 15, 16, and 18; Randi Hamilton of Gene Barker & Associates provided court-reporting services on August 17.

At the hearing, the Board received the sworn testimony of witnesses, admitted exhibits, and heard arguments on behalf of the parties. On the first day of the hearing, the Board also conducted a site visit to the Storedahl property and nearby areas, including the Dean Swanson property, Daybreak Park, the Clark County Yards, and view property overlooking the East Fork of the Lewis River from the south. Having fully considered the record, the Board enters the following:

[1] Although Board member Danner presided at the hearing and took part in the Board discussion, his position became vacant before this decision became finalized.

FINDINGS OF FACT

[1]

Respondent Storedahl owns and operates the Daybreak Mine in rural Clark County between La Center and Battle Ground. The site area totals approximately 300 acres, of which about 80 acres are affected by gravel mining and processing, including mine ponds, stockpiling areas, and roadways. The remaining areas have, over many decades, largely been cleared of native vegetation, filled, leveled, and dedicated to agriculture. A portion of the site is adjacent to the East Fork of the Lewis River.

[2]

The East Fork of the Lewis River emerges from a narrow canyon approximately one mile above the site into an alluvial valley, which ranges from 0.5 to 0.75 miles wide. The river gradient abruptly decreases and sediment is deposited from the headwaters. The Daybreak site is located in the flat alluvial valley. The river transitions into a flat, tidally influenced sand and gravel streambed just below the Daybreak site. Ex. RS-C-276 (HCP) at 3-5. Prior to the area's development for agriculture, the river near the project site was characterized by braided channels with extensive meanders and associated wetlands throughout the valley floor. Ex. RS-C-277 (Final EIS) at 5. The river has since transformed into a single channel and is more confined. The primary control of the river is the Daybreak Bridge, which produces a fire hose effect because of the narrowness of the river in the area coupled with the armoring of both riverbanks.

Testimony of Randy Sweet;[2] HCP Technical Appendix C, Addendum 1 - Daybreak Ponds Avulsion Mitigation (May 2001)(hereinafter Addendum 1) at 14.

[3]

The East Fork of the Lewis River in the area of the Daybreak site is classified as Class A waters under the Water Quality Standards for Surface Waters of the State of Washington.[3] Ex. RS-C-276, at 3-38. The East Fork of the Lewis River has been listed on the state 303(d) list for impaired water bodies because of high temperatures and fecal coliform.[4] The HCP found that water quality upstream of the Storedahl property was affected by many activities unrelated to the Daybreak Mine, including residential development, county road maintenance, and un-permitted mining activity. RS-C-276 at 3-54.

[4]

A small tributary to the East Fork of the Lewis River, Dean Creek, flows along the northwest boundary of the site. Dean Creek is adjacent to a livestock pasture for about 1,350 feet, and the banks lack structure and mature vegetation due to historic livestock grazing. Ex. RS-C-277 at 5. The Creek lacks a well-defined floodplain in the reach adjacent to the Daybreak site. RS-C-276 at 3-37. It continues for about one-third mile west of the Daybreak site before it flows into the East Fork of the Lewis River. Id at 3-96. Dean Creek is considered a seasonally intermittent stream because a portion of the Creek adjacent to the site is dry during the late summer. Ex. RS-C-277 at 9. The upper reaches of Dean Creek have cooler temperatures and

[2] Mr. Sweet is a geologist, engineering geologist, and hydrogeologist. See Ex. RS-C-476.
[3] WAC 173-201A.
[4] No Total Maximum Daily Loads (TMDL) have been established yet by Ecology for the East Fork of the Lewis River. Ex. RS-C-276 at 3-39.

well-oxygenated water because of its higher gradient and shading by riparian vegetation. If problems related to higher temperatures and dissolved oxygen levels are addressed in Dean Creek in the area where it flows past the Storedahl property, the Creek could provide winter salmonid habitat. Id. at 10; Ex. RS-C-276 at 3-54; Testimony of Dudley Reiser.[5]

[5]

The mining operations have occurred on the site since at least 1968, and the site has operated under a Washington Department of Natural Resources surface mining permit since 1971. Storedahl acquired the land and operations in 1987. Between 1987 and 1995, Storedahl mined on part of the site, but no active mining has occurred there since 1995. Storedahl has used the site for sand and gravel processing. Old excavation pits are now used as a series of five sequential settling ponds used in the processing operations. Ex. RS-C-276; Ex. RS-C-707.

[6]

The five ponds resulting from the gravel mining are located just north of the East Fork of the Lewis River and are hydraulically connected with each other in a stair-step manner going downstream. Testimony of Thomas Grindeland.[6] Water enters the ponds primarily as groundwater seepage and precipitation. Water exits the ponds by groundwater seepage and evaporation. Pond 5 also has a surface water discharge, which is covered under the NPDES General Permit. In addition to the outflow to the East Fork Lewis River, Pond 5 has a surface connection to Dean Creek. Ex. RS-C-276 at 3-30, 3-112. Pond 5 receives significant surface

[5] Dr. Reiser is a fisheries scientist. See Ex. RS-C- 474.
[6] Mr. Grindeland is a civil engineer. See Ex. RS-C-473.

water inflow from Dean Creek during the winter months, but no significant discharge from the creek in the summer months. Id. at 3-30 and 3-31. The water level of Pond 5 is also affected by beaver activity. Id. at 3-30.

[7]

Finding that the site contains large reserves of concrete-quality aggregate for which there is high demand, Storedahl began in the mid-1990s to consider plans to expand the mine and processing operations. It proposed to expand mining to approximately 101 acres north of the existing ponds and processing area, at least 200 feet from the floodway and outside the channel migration zone and 100-year floodplain of the East Fork of the Lewis River. Ex. RS-C-276, figs. 3-28, 3-34; Ex. RS-C-277; Ex. RS-C-466. Within the shoreline, Storedahl would continue to locate facilities necessary for activities associated with the processing of sand and gravel, including the washwater treatment system, stockpiling, conveyor belt, and road and berm maintenance facilities. In 1996, it began preparation of a Habitat Conservation Plan pursuant to the Endangered Species Act, 16 U.S.C. Sec. 1531 et seq., and an Environmental Impact Statement ("EIS") pursuant to the National Environmental Policy Act, 42 U.S.C. Sec. 4321 et seq.

[8]

The U.S. Fish and Wildlife Service ("USFWS") and National Marine Fisheries Service ("NMFS")(collectively "Services") completed a draft EIS in November 2002, and, after consideration of comments from federal, state, and local agencies and members of the public, issued a final EIS in November 2003. Ex. RS-C-277, 278. That month, Storedahl also

completed its Daybreak Mine Expansion Project and Habitat Conservation Plan ("HCP"). The HCP set forth the conditions for the proposed Daybreak Mine expansion to "specify how [Storedahl] will operate its Daybreak Mine in Clark County, Washington and implement conservation measures in a manner that is consistent with the requirements of the federal Endangered Species Act." Ex. RS-C-276, p. xxi.

[9]

The HCP set forth 18 conservation measures ("CMs") and 10 monitoring and evaluation measures ("MEMs"). The CMs were designed to address potential impacts of the project on species covered by the HCP, including Columbia River chum, Chinook and coho salmon, steelhead, bull trout, sea-run cutthroat trout, Pacific lamprey, river lamprey, and Oregon spotted frog. The MEMs set forth how Storedahl will monitor its compliance with each of the CMs, provide a schedule for monitoring and reporting, and address appropriate management responses to monitored conditions. Ex. RS-C-276, p. xxiv, p. 1-9; RS-1; Testimony of Randy Sweet.

[10]

Storedahl subsequently submitted an application for a shoreline substantial development permit /conditional use permit with Clark County. This application was one of several permit applications submitted related to the proposed Daybreak Mine expansion. Clark County Land Use Hearing Examiner, Daniel Kearns, consolidated the applications for hearing, and issued an order, entitled "Final Order," on November 4, 2004, conditionally approving the applications, including the shorelines permit. Examiner Kearns incorporated into the permit the conditions of

the HCP that pertain to the shoreline.[7] Ex. RS-C-707. FOEF/FF and Storedahl appealed the Examiner's decision to the Clark County Board of County Commissioners ("BOCC").

[11]

On February 22, 2005, the BOCC approved Resolution 2005-02-14, upholding the Examiner's final order with regard to the shorelines substantial development permit and shorelines conditional use permit, as well as site plan review approval, wetlands permit, habitat

[7] The conditions imposed on the shoreline permit were the following:

> No mining is proposed, nor is it allowed, to take place within the shoreline jurisdiction of the East Fork Lewis River or within 75 feet of the top of bank of Dean Creek. The operations and improvements proposed as part of this development in the shoreline, and which require a permit, are accessory to mining … and include the following:
>
> - Location of the storage shed, storage tank, metering compartment and mixing tank for the water quality additives (flocculants and coagulants) are in the 100-year floodplain adjacent to pond 1, but per the HCP [Habitat Conservation Plan] Addendum will be removed from the shorelines area of jurisdiction prior to initiating operations at the site (Ex. 387);
> - The temporary stockpiling of sediments to be used for reclamation are proposed to be located within the 100-year floodplain;
> - Portions of the conveyor which cross the 100-year floodplain to transport rock from the active excavation site to the processing area;
> - The pump and float system located near the edge of pond 2 to provide water to the sand classifier;
> - Portions of the sand and gravel finished product stockpiles are located within the 100-year floodplain and the 200-foot shoreline management area;
> - The scale house/office, truck scale and maintenance building are within the 200-foot shoreline management area;
> - Portions of the site access road, Storedahl Pit Road, is within the 200-foot shoreline management area;
> - Some temporary noise berms and stockpiles are within the 100-year floodplain;
> - Portions of the aggregate conveyor system are within the 100-year floodplain; and
> - Fill being placed in the existing ponds on the site for reclamation purposes is within the 100-year floodplain.

Hearings Examiner Final Order, November 4, 2004 (Finding No. 41)(Ex. RS-C-707).

conservation ordinance approval, the conditional use permit, and SEPA compliance.[8] The November 4, 2004, Final Order of the Hearing Examiner added a condition requiring a closed-loop processing system for washing the product at the site, and also prohibited the discharge of process washwater into the settling ponds for additional water quality protection. Ex. RS-C-707 at 78. On February 24, 2005, Clark County sent Ecology notification that, pursuant to Resolution 2005-02-14, Storedahl's application for a shoreline substantial development permit and conditional use permit were conditionally approved. Ex. R-1.

[12]

Kim P. Van Zwalenberg is the lead shoreline specialist at Ecology's Southwest Regional Office. In that position, which she has held since 1990, she has been responsible for implementation of the state Shoreline Management Act and Coastal Zone management Act in cooperation with local governments. Ex. R-3. She received the notification from Clark County that the shoreline permits were approved, and she reviewed the application, along with supporting materials, including the Clark County Hearing Examiner's order, site plans, and the BOCC resolution. She concluded that the project as conditioned complied with both the Shorelines Management Act and the Clark County master program. She recommended to her supervisor, Perry Lund, that the permit be approved as submitted by the County. Testimony of Kim Van Zwalenberg.

[8] The BOCC remanded to the Hearing Examiner the issue of a rezone for a surface mining overlay, finding that the extent of nonconforming mining rights was a contested issue and that the Examiner had not issued a final decision. BOCC Resolution 2005-02-14, p. 5

[13]

On March 10, 2005, Ecology, in a letter from Mr. Lund, notified both Clark County and Storedahl that it approved the substantial development/conditional use permit,[9] agreeing that the proposal as conditioned by the County met the requirements of the County's Shoreline Master Plan ("SMP") and the criteria set forth in WAC 173-27-160. Ex. R-2. Petitioners filed their appeals with this Board on March 31, 2005.

Avulsion

[14]

One of the concerns raised by the Petitioners is the potential for an avulsion through the existing Daybreak Pits affecting their property. An "avulsion" is a sudden and unexpected shift in the river channel. Avulsions are a concern in general because of the associated transportation of sediments and the potential for higher temperatures in the water body if the avulsion results in a wider surface area of slower moving water. The sediments can cover the gravels used by salmon for spawning, can affect fish respiration, and make it more difficult for fish to find food. Ex. RS-C-276 at 3-44.

[15]

Two avulsions occurred in the East Fork Lewis River in recent years. In 1995, the river channel shifted south and migrated into the Mile 9 Pit. This avulsion resulted in the abandonment of approximately 1,700 feet of channel. The Mile 9 Pit is located approximately one-half mile upstream of the Ridgefield Pits. In 1996, the channel avulsed into the Ridgefield

[9] Ex. RS-C-705.

Pits, creating a channel flowing through a complex of six deep pools. The upper two pools have since largely been filled with sand and gravel. Ex. RS-C 276 at 3-103. The Ridgefield Pits are now being used by juvenile salmon as rearing habitat, and adult salmon use the area of the Pits as holding habitat when migrating upstream. Some of the upstream ponds also contain habitat suitable for salmon spawning. Testimony of Dudley Reiser. Summertime temperatures in the river flowing through the Ridgefield Pits appear to be higher because of the larger surface area of the channel in that stretch of the river. Ex. RS-C-276, at 3-40 and 6-128.

[16]

The HCP and FEIS discuss the possibility of an avulsion of the East Fork Lewis River away from its existing channel into the existing Daybreak Ponds or the future ponds created by removal of the aggregate. A detailed study has indicated that there is a significant potential for an avulsion to occur into the Daybreak Ponds within several decades. Addendum 1 at 1. The most likely area of future avulsion is into Pond 1. RS-C-277 at 7.

[17]

The potential for an avulsion in the East Fork Lewis River led the Services to require that the ponds be made "avulsion-ready." Testimony of Randy Sweet. The Daybreak Ponds Avulsion Plan was developed in order to help prevent an avulsion, but if an avulsion did occur, to control the magnitude and extent of the avulsion. Addendum 1 at 2. The major feature of this plan is the substantial filling of Daybreak Ponds 1, 2, 3, and 4 with soils from off-site sources. For Ponds 1, 2, and 4, this includes fine-grained sediments derived from processing gravel from the Tebo Gravel Mine. The amount of fill needed is approximately 571,000 cubic yards. Id. at 7

and 27. The narrowing of the existing ponds will direct an avulsion into a channel that mimics historic channel shape and location. The resulting channel would be narrower than the existing ponds and will reduce the surface area of open water. Id. at 21; Testimony of Randy Sweet.

[18]

The avulsion plan also calls for the modification of the surface water discharge outlets from Pond 5. The three current outlets from Pond 5 would be modified so that only the outlet to Dean Creek would be used for surface water discharges. The outlet to Dean Creek would also be raised to limit the opportunity for Dean Creek to enter Pond 5. The other two existing outlets would be filled with "erodible sandy soil as a fuse plug spillway." Id. at 15; Testimony of Randy Sweet. These two other outlets would be graded at a lower elevation than the remainder of the berm, allowing water that entered Pond 5 to overtop at these two locations. The water would then incise into the erodible fill allowing the creation of the spillway and providing control to the direction of the flow. Testimony of Tom Grindeland. The avulsion of the river back up into the other ponds from Pond 5 is not a concern because the water would have to flow uphill under great force for such an event to occur. Id. Dean Creek will be modified to give it a more defined channel and floodplain terracing will be employed along its banks to increase its ability to hold surface water.

[19]

The fill will be placed into Ponds 1-4 over previously accumulated sediments. The fill will be added slowly so that it can be consolidated and strengthened. Consolidation refers to the expelling of excess pore water between individual soil particles. By placing a load of excess soil

over the planned top of the fill, it will allow the soil to be compacted. Addendum 1 at 9. The fill process will be monitored so that each cell's fill is primarily consolidated. Testimony of Randy Sweet.

[20]

Petitioner's witness, Alan Wald,[10] expressed concerns over the impacts that placing this fill would have upon the hyporheic zone of the East Fork Lewis River. The hyporheic zone has been defined generally as the "subsurface mixing zone or interface of groundwater and surface water and the associated biological and chemical processes. This water moves generally in a downstream direction. The hyporheic zone affects stream ecosystems by acting as a source of biological productivity, a refuge for benthic invertebrates during high flows, and a location for biogeochemical processes such as nitrogen transformation and retention that can affect the growth of riparian plants. Ex. RS-C-276, at 3-32. An example of hyporheic zone contributions to the local ecology is the number of insects that spend part of their lives in the river gravels, emerge in the floodplain, and then fly back to the river. Testimony of Alan Wald. Microbial organisms can also decompose leaf litter into useable nutrients released into the stream channel. Ex. RS-C-276, at 3-36. Groundwater monitoring indicates that the likely hyporheic flow path for the site intersects with existing Pond 1, and moves from Pond 5 towards the river. Id. at 3-34. The groundwater in the area of the future ponds is primarily recharged from non-hyporheic

[10] Mr. Wald is a hydrologist with the Habitat Program for the Department of Fish and Wildlife. Ex. A-51. Mr. Wald testified as a private citizen and not as a representative of the agency.

sources, such as precipitation infiltrating to the groundwater and groundwater discharge from upland sources. Id. at 3-33.

[21]

Mr. Wald's concerns regarding the impact of fill on the hyporheic zone was that the movement of groundwater back and forth between the river would be disrupted because the water would encounter a big plug of fill. Mr. Wald later testified that the water would get into the river further down gradient of the pits. He did not identify any potential effects this would have upon water quality or quantity, or provide any other analysis as evidence.

[22]

Mr. Wald testified that he didn't believe that the HCP adequately addressed the possibility of an avulsion. Mr. Wald acknowledged that he had read only an earlier draft of the HCP and had not looked at the Final or Draft EIS. The HCP, already partially described above, has extensive provisions that address the possibility of an avulsion.

[23]

Among these conservation and monitoring measures are several that address the potential for avulsion into the existing ponds. CM-5 requires Storedahl to create a $1 million conservation and habitat enhancement endowment, as well as measures for long-term habitat monitoring, management, and response to avulsion events. The fund would be established by an assessment on gravel processed at the site.

CM-6 requires Storedahl to establish an early successional conifer and hardwood forest with the 100-year flood plain, along existing and created ponds, wetlands, and uplands. The

establishment of this forest is intended to create increased resistance to avulsion and reduced erosion and runoff. It is also designed to enhance watershed functions, provide shade to moderate water temperatures in fish habitat, add roots and woody debris to improve habitat complexity, and increase the availability of terrestrial invertebrates on which fish feed.

CM-7 requires Storedahl to create floodplain terraces for overbank flow and thereby augment the buffer between Dean Creek and the created ponds. This is intended to reduce the likelihood of movement of Dean Creek into new ponds and wetlands, and enhance the topsoil to support successional revegetation.

CM-8 requires Storedahl to take certain steps to reduce the risk of avulsion through its mining and reclamation designs. It requires Storedahl to minimize the size of created open water areas and configure new ponds parallel to the river channel. Storedahl must establish shoreline vegetation communities similar to off-channel habitat, and accelerate stabilization of areas most susceptible to avulsion and head-cutting.

CM-9 establishes a contingency plan to address potential avulsion of the East Fork into existing ponds or the proposed mining area, by both reducing the potential for avulsion of the East Fork into the Daybreak site, and to mitigate for negative effects in the event avulsion occurs into the ponds.

CM-10 requires Storedahl to study the water temperature, dissolved oxygen levels, fish use, and geomorphology of the Ridgefield pits to assess their impacts on fish habitat and provide information to help refine the contingency plan to minimize the effects of an avulsion event, should one occur. Testimony of Sweet; RS-1; RS-C-276.

[24]

The HCP includes three monitoring and evaluation measures to evaluate avulsion risk and require responsive action should an avulsion event occur. MEM-05 requires vegetation monitoring (and reporting) annually for the first three years after the re-vegetation, and then after five and 10 years. The monitoring shall determine whether the following criteria are met: an 80 percent survival of rooted stock, 80 percent canopy cover for trees (cottonwood, alder, and conifers) after 15 years, 30 percent cover of native shrub in the forest after 10 years, 90 percent native shoreline herbaceous cover after one year, 50 percent native shoreline shrub cover after three years, and 80 percent shoreline shrub cover after five years. Where these management criteria are not met, it directs Storedahl to determine the reason for the non-effectiveness and then, if appropriate, to correct and replant and/or reseed. RS-C-276, fig. 5-6, and chapter 4; Testimony of Sweet.

MEM-06 requires monitoring of the riparian and channel condition of Dean Creek. Monitoring shall occur in years 1, 2, and 5, following flows greater than or equal to the 10-year recurrence interval after the completion of planting and floodplain rehabilitation, as well as after habitat enhancement is completed. The monitoring results are to be reported to the services at 5-year reviews. The monitoring shall determine whether the following criteria are met: 80 percent of the shade and canopy are from native species, raw eroding banks are less than or equal to 25 percent of the total reach after five years, and evidence of an increase in pool or slow water habitat. Where these management criteria are not met, it directs Storedahl to determine the reason for the non-compliance and/or non-effectiveness, and correct as appropriate.

MEM-07 requires a visual inspection of critical bank stability along the East Fork of the Lewis River at least once a year for five years. The first inspection shall take place during the first low-flow season of the HCP and then annually following high flow for the first five years. After that, Storedahl shall survey following any observed change, or once every five years. The monitoring results are to be submitted to the Services within 10 months of monitoring. The monitoring shall determine whether the following criteria are met: For Site G, that the distance between the bank and the edge of the road is greater than 80 feet and the overflow channel at point G consistently transmits less than 40 percent of the flow during normal high flows. If erosion exceeds these criteria, Storedahl shall implement appropriate engineering solutions along the access road. For Site H, that the flow has not shifted back into the former channel between Sites I and J and that no active erosion is observed at Site H following normal high flows. If these criteria are exceeded, Storedahl must implement appropriate engineering solutions along the adjacent bank. For Site J(a), that the flow has not shifted back into the former channel between Sites I and J and that no active erosion is observed at Site J following normal flow years. For Site J9b), that the erosion rate indicates no threat of breaching Pond 5 for at least five years. Where these criteria are exceeded, Storedahl shall increase monitoring frequency and implement appropriate engineering solutions along the adjacent bank.

[25]

Don and Dean Swanson are owners and residents of property neighboring the Storedahl property to the northwest. Much of their testimony focused on the history of flood events of the East Fork Lewis River, including how sediment was deposited on their property. Testimony of

Don and Dean Swanson. In addition, Don Swanson testified he was concerned that the placement of fine fill into the Daybreak Ponds would make the fill prone to avulsion. Alan Wald, likewise, testified he was concerned about the possibility of the fill material being transported in the case of an avulsion. The Daybreak Mine site has historically operated under NPDES permit No. WAG-50-1359, which allows a discharge of up to 50 NTUs (nephelometric turbidity units).

[26]

The analysis contained in the HCP recognizes that the relatively fine sediments placed as fill in the ponds could be a potential source of turbidity. However, a fall velocity analysis showed that the fine sediments would be transported to the tidally-influenced areas in days even under average flow conditions. The river was recognized as having a large capacity to transport sediments. "Consequently, any potential impact of the fine-grained sediments would be short-lived." Ex. RC-S-376 at 6-30 and 6-31. Furthermore, the river would have to be able to access the sediments in the ponds, and only a portion of those can be moved because the bottom of the ponds are raised up to the lowest level of the river channel. After an initial flush of some of the sediments from the ponds to the river, it is likely to diminish quickly. This is because the ponds begin to capture other sediments transported from upstream, and a delta eventually builds up by the ponds. Testimony of Tom Grindeland. The HCP also notes that fine sediments are already entering the river from a variety of sources within the watershed and floodplain. It states that "[p]otential impacts of fine grained sediments into the Daybreak Ponds on turbidity characteristics of the East Fork Lewis River is not significant." Ex. RC-S-276 at 6-31. Turbidity

is not generally a concern for groundwater because the velocity of the water is too slow. Testimony of Randy Sweet.

[27]

The new ponds created by aggregate excavation will be separated from the existing river channel and avulsion paths by the existing Daybreak Ponds. The new ponds could only be incorporated into the East Fork Lewis River "if the river avulses through local housing, utility corridors, and roads, or through the existing ponds, and from there into the new ponds." Ex. RS-C-267 at 6-32.

Water Quality – Fill Material

[28]

Dean Swanson also testified he was concerned about the possibility of the fill containing contaminants that would eventually find its way into Dean Creek and then his well. No evidence was presented to indicate any fill material used to date contained contaminants. The HCP states that some 300,000 cubic yards of soils will be imported from regional excavation projects. App. C. It also states "The fill material imported from off-site will be certified as free from deleterious materials and chemical contamination prior to placement."

[29]

The SM-8 Reclamation Plan prepared for the Washington State Department of Natural Resources states that "clean overburden from local construction projects will receive a Level 1

Environmental Assessment prior to acceptance at the project."[11] A Level 1 Environmental Assessment involves research of a property to determine potential impacts from past use or practices and does not include sampling or laboratory analysis of soil or water from the site. Ex. RS-C-708.

[30]

While the SM-8 reclamation plan does not require more than Level 1 assessment, Storedahl's procedures for acceptance of imported soil to their mining sites has been to inspect the source site and collect composite samples of the specific soil proposed for delivery. Storedahl recognizes that since many sources of the imported soil are from public works projects in rights-of-way, sometimes it is not possible to conduct a Level I assessment because the soil is not always associated with a particular piece of property. Therefore, Storedahl analyzes the samples for the most common potential contaminant, Total Petroleum Hydrocarbon ("TPH"), and reviews the laboratory analytical results prior to acceptance. The procedure Storedahl uses is similar to a Level II Environmental Assessment that involves sampling and analysis of the soils to screen for potential contaminants. Testimony of Alistaire Clary; RS-C-708.

[31]

In response to Board questions, there are no written protocols in either the HCP or the reclamation plan that address what process should be followed if a sample of fill fails the test for

[11] The Application Form for Reclamation Permit Form SM-8A also states the need for "300,000 cubic yards of clean fill to be imported for infill and reconfiguration of existing ponds to create wetlands and shallow water habitat along shorelines ." Ex. RS-4 at 4.

TPH. It is unclear whether soil from the source site is automatically rejected for use as fill, or whether resampling of the soil is authorized, which could lead to soil from that source site being used as fill after the site originally tested positive for TPH. To date, no fill placed on the site has failed any of the tests. No analytic testing is conducted to determine if the proposed fill contains naturally occurring substances of potential concern, such as arsenic. Testimony of Alistaire Clary.

Other Water Quality Issues

[32]

Petitioners argue that Storedahl failed to meet the requirements for the issuance of a conditional permit under the policies of the Shoreline Management Act or WAC 173-27-160,[12] particularly with regard to avulsion, water temperature, water quality, water quantity, whether the permit was improvidently granted, and whether a shoreline conditional use permit is required for the entirety of the site. At the close of Petitioner's case, Respondent Storedahl moved for a directed verdict on all issues. After deliberation, the Board issued a directed verdict dismissing the issues of water temperature, water quantity, and water quality not pertaining to the composition of the fill to be used in the pits. The Board found that Petitioners had offered no testimony or evidence to indicate that Ecology had erred in approving the shorelines permit with regard to those issues, and therefore had not made a prima facie case. The Board concluded that Petitioners did make a *prima facie* case with regard to avulsion and

[12] In the pre-hearing conference, Petitioners also asserted that Storedahl failed to meet WAC 173-27-180, WAC 173-27-200, and WAC 173-27-210, as well as the Clark County Shoreline Master Program.

water quality regarding potential contaminants in the fill materials for the ponds. The other issue, whether a shoreline conditional use permit is required for the entirety of the site (issue (f)), also remained as a legal issue to be addressed by the Board.

The Board notes that the HCP has several measures to address the potential impacts to water temperature from the project[13] , to increase water quantity,[14] and to otherwise address water quality issues.[15] The remaining issue, whether a shoreline conditional use permit is required for the entirety of the site, is discussed below.

Shoreline Delineation

[33]

Petitioners argue that Ecology erred in approving Clark County's issuance of a conditional use permit because the proposed mining activity occurred within the shoreline jurisdiction. Petitioners' witness, Al Wald, argued that the proper shoreline jurisdiction extends from toe to toe of the valley floor. Mr. Wald's opinion is based upon former WAC 173-22-040(2). This provision provides, in part: "On river deltas and flood plains where no dikes exist, the wetland area shall be from toe to toe of the valley floor. . . ." Clark County adopted its SMP (CCSMP) in 1974. It defines "shorelines" as including all water areas and their associated wetlands. CCSMP Ch.II p. 5. Before the SMA was amended in1995, it applied to "water areas of the state…and their associated *wetlands.*" However, the SMA now uses the term *shorelands*

[13] The Water Management Plan requires a seasonal release from the ponds to Dean Creek during the summer. Ex. RS-C-276 at 6-3.

[14] CM-3 requires Storedahl to donate water rights to the state in trust for in-stream flow enhancement. RS-C-276 at 13-15. This will increase base flows to the East Fork of the Lewis River and augment flows in Dean Creek.

[15] A closed-loop clarification system will virtually eliminate the discharge of process waste water to the ponds. Ex. RS-C-276 at 6-30.

to denote areas previously often referred to as "SMA wetlands." Clark County has not amended the CCSMP to reflect the new statute or WAC. Petitioners contend that Storedahl is subject to the language in the CCSMP, which has not been updated.

[34]

The Federal Emergency Management Agency (FEMA) redefined the boundaries of the 100-year floodplain for the Storedahl property in July 2002. Under the new FEMA map, no mining is proposed within the 100-year floodplain.

[35]

Petitioners have presented no evidence to support the argument that Clark County shoreline jurisdiction extends outside the flood plain of the East Fork of the Lewis River based on proximity to and influence by the river, periodic inundation, or hydraulic continuity.

Reporting Requirements

[36]

During the course of the hearing, Petitioners expressed concern over getting public access to various reports that are required of Storedahl. Under Condition A-8 of the Hearings Examiner Final Order of November 4, 2004, copies of all reports and documentation required under the terms of the HCP in connection with monitoring and evaluation measures must be provided to Clark County at the same time they are furnished to the Services. Ex. RS-C-707 at 78.

CONCLUSIONS OF LAW

[37]

The Board has jurisdiction over the subject matter and the parties. RCW 90.58.180. The Board reviews the issues raised *de novo*. Petitioners have the burden of proving that Ecology's approval of the shoreline conditional use permit is erroneous. RCW 90.58.140(7).

[38]

The Shoreline Management Act (SMA) applies to all "shorelines" of the state, as they are defined and delineated in the SMA. RCW 90.58.040. Enacted as a cooperative program of shoreline management, the SMA gave local governments the "…primary responsibility for initiating the planning required by [the SMA] and administering the regulatory program consistent with the policy and provisions of [the SMA]." RCW 90.58.050. The SMA is implemented largely through local shoreline management master programs (SMP) that regulate uses of shorelines and are adopted pursuant to the SMA to implement its goals and policies. Ecology has the authority to ensure that local governments' SMPs satisfy the statewide interest and, once a jurisdiction's SMP has been adopted and approved by Ecology, it becomes part of the State master program, which is made up of all the local master programs. RCW 90.58.030(3)(c). Clark County adopted its SMP (CCSMP) in 1974.

[39]

The criteria for issuance of a shorelines conditional use permit are set forth in WAC 173-27-160. Section 1 of that regulation states:

(1) Uses which are classified or set forth in the applicable master program as conditional uses may be authorized provided that the applicant demonstrates all of the following:

a. That the proposed use is consistent with the policies in 90.58.020 and the master program;
b. That the proposed use will not interfere with the normal public use of public shorelines;
c. That the proposed use of the site and design of the project is compatible with other authorized uses within the area and with uses planned for the area under the comprehensive plan and shoreline master program;
d. That the proposed use will cause no significant adverse effects to the shoreline environment in which it is located; and
e. That the public interest suffers no substantial detrimental effect.

WAC 173-27-160(1). Section 2 of the regulation provides further, "In the granting of all conditional use permits, consideration shall be given to the cumulative impact of additional requests for like action in the area." WAC 173-27-160(2).

Avulsion

[40]

The Petitioners raise concerns about the project's potential for increasing avulsion on the river. Don Swanson was concerned about the placement of fine fill into the ponds because he believed this type of fill would be more prone to avulsion. Alan Wald also testified that the fill sediments would be prone to erosion during an avulsion, and that if the sediments were released downstream it would be harmful to fish. However, the witnesses for the Petitioners did not present any data, modeling, analysis, or other facts to indicate that avulsion was not adequately addressed. Furthermore, these witnesses had not even read the FEIS or the HCP that was approved by the Services.

[41]

As discussed earlier, the HCP contains numerous provisions pertaining to avulsion. This includes specific requirements that will make an avulsion less likely to occur in the first place. The placement of fill along the borders of the ponds will also increase the riparian buffer from the river and allow for the planting of mixed conifers and hardwoods. The trees would act to help dissipate the energy of the avulsion, and the soils would be less prone to erosion if bound by root mats. If an avulsion did occur, the trees would also provide some shading to the pit area.

[42]

If an avulsion does occur, the most probable location for an avulsion is through existing Pond 1. If this occurs, implementation of the HCP provides for a controlled redirection of the potential avulsion paths back into the main channel through the modifications made to Pond 5. The modifications to the existing ponds and Dean Creek will result in shorter longevity and magnitude of avulsion effects. The narrowing of the ponds would result in less surface water exposed, making it less likely that water temperatures would rise.

[43]

The HCP acknowledges that the fine sediments placed into the existing Daybreak Ponds could be considered as a potential source of turbidity. However, the fall velocity analysis conducted for the site showed that the fine sediments would be transported to the tidally-influenced area within days, even under average annual flow conditions. Therefore, any impact from the sediments coming from the ponds would be short-lived.

[44]

Tom Grindeland testified that only a portion of the sediments in the ponds would be accessible to the river, and only a portion of those could be moved. This is because the bottom of the ponds are being raised up to the lowest elevation of the river channel under the provisions of the HCP, which reduces the chance of sediment movement. In addition, the fill will be carefully added to the ponds to help with their consolidation.

[45]

Mr. Wald also expressed concern that the placement of fill into the ponds could block the hyporheic flows in the area. There is no evidence that the hyporheic zones would be blocked by the placement of the fill. In fact, Mr. Wald conceded that flows into the hyporheic zone would move down gradient from the ponds. He failed to identify how the hyporheic zone would be negatively impacted if this occurred. The conversion of some of the pond area to forest and associated wetlands will add to the diversity of the area and should provide a net environmental benefit.

[46]

The Board finds the Petitioners have failed to demonstrate that avulsion was inadequately addressed when the Conditional Use Permit was approved.

Water Quality

[47]

The remaining water quality issue raised by the Petitioners pertains to the new fill placed in the existing Daybreak ponds. Dean Swanson testified that if there were contaminants in the fill, they could find their way into Dean Creek and into his well.

[48]

The evidence indicates that Storedahl's procedures for accepting imported fill is to conduct a Level I assessment when that is possible, and to conduct a Level II assessment on a sample of the soil for TPH. The Board believes that although these Level II assessments for TPH are important, particularly for soil imported from public works projects, there is nothing in the HCP, Hearing Examiner Order, or Conditional Use Permit that requires Storedahl to continue to conduct these assessments prior to accepting fill. The Board is also concerned that there are no protocols in place directing Storedahl how to proceed if a soil sample does test positively for TPH. The Board therefore finds it is appropriate to amend this portion of the Conditional Use Permit to require Storedahl to conduct Level II assessments for TPH on imported fill. The Permit is also remanded to Ecology for the sole purpose of developing protocols for the use of fill from a site after it has tested positively for TPH.

[49]

With the exception of the fill testing as discussed above, the Petitioners have not met their burden of establishing that Ecology improperly granted approval for the Conditional Use Permit. The evidence shows that the HCP and the FEIS fully considered and addressed issues

pertaining to avulsion and water quality. Furthermore the Conditional Use Permit requires full compliance with the HCP and the Hearing Examiner's Final Order issued on November 4, 2004.

Flood Plain Delineation

[50]

Petitioners argue that Ecology erred in approving Clark County's issuance of a conditional use permit because the proposed mining activity occurred within the shoreline jurisdiction. Petitioners' witness, Al Wald, argued that the proper shoreline jurisdiction extends from toe to toe of the valley floor. Mr. Wald's opinion is based upon former WAC 173-22-040(2). This provision provides, in part: "On river deltas and flood plains where no dikes exist, the wetland area shall be from toe to toe of the valley floor. . . ." Clark County adopted its SMP (CCSMP) in 1974. It defines "shorelines" as including all water areas and their associated wetlands. CCSMP Ch.II p. 5.

[51]

The SMA was amended in 1995 by ESHB 1724 as part of land use regulatory reform, several years after the adoption of the CCSMP. Before the 1995 amendments, the SMA applied to "water areas of the state…and their associated *wetlands.*" However, the SMA now uses the term *shorelands* to denote areas previously often referred to as "SMA wetlands." The CCSMP reflects and utilizes the SMA language that existed in 1974. Despite the change in the state statutes and regulations upon which the CCSMP is based, this reference to wetlands in the Clark County definition of "shorelines" has not been changed.

[52]

The evidence in this case has referred to four related terms: shorelines, shorelands, wetlands, and flood plains. The current SMA broadly defines *shorelines*, and also *shorelands* as follows:

> "shorelines" means all of the water areas of the state, including reservoirs, and their associated *shorelands*, together with the lands underlying them; except (i) shorelines of state-wide significance; (ii) shorelines on segments of streams upstream of a point where the mean annual flow is twenty cubic feet per second or less and the wetlands associated with such upstream segments; and (iii) shorelines on lakes less than twenty acres in size and wetlands associated with such small lakes;

RCW 90.58.030(2)(d) (emphasis added).

> "Shorelands" or "shoreland areas" means those lands extending landward for two hundred feet in all directions as measured on a horizontal plane from the ordinary high water mark; floodways and contiguous floodplain areas landward two hundred feet from such floodways; and all wetlands and river deltas associated with the streams, lakes, and tidal waters which are subject to the provisions of this chapter; the same to be designated as to location by the department of ecology.

RCW 90.58.030(2)(f) (emphasis added).

[53]

Ecology has promulgated a rule establishing the criteria for designation of shoreland areas. For streams, it provides as follows:

> Streams. The shoreland area shall include the greater of:
>
> (a) Those lands which extend landward two hundred feet as measured on a horizontal plane from the ordinary high water mark;
> (b) Those floodplains which extend landward two hundred feet as measured on a horizontal plane from the floodway: Provided, that local government may, at its discretion, include all or a larger portion of the one hundred-year floodplain within the associated shorelands. Designation of this shoreland area shall be in accordance with chapter 173-19 WAC, the state master

program. If the applicable master program does not designate the shoreland area for a stream, it shall be designated under the rules which applied at the time of adoption by the department;

(c) Those wetlands which are in proximity to and either influence or are influenced by the stream. This influence includes but is not limited to one or more of the following: Periodic inundation; location within a floodplain; or hydraulic continuity; and

(d) Those lands within a river delta floodplain except for those lands that can reasonably be expected to be protected from flood waters by flood control devices maintained by or maintained under license from the federal government, the state, or a political subdivision of the state.

WAC 173-22-040(3). Petitioners argue that Clark County shoreline jurisdiction extends outside the flood plain. The only provision of WAC 173-22-040(3) that could support a claim that SMA jurisdiction in Clark County extends beyond the flood plain is (c), which provides for possible inclusion of areas beyond the flood plain of the East Fork of the Lewis River based on proximity to and influence by the river, periodic inundation, or hydraulic continuity. In this case, Petitioners have presented no evidence of such conditions.

[54]

Petitioners note that Clark County SMP's definition of "shorelines" has not changed since its adoption in 1974 and still includes the word "wetlands." The SMP states: **"**'shorelines' means all of the water areas of the state, including reservoirs, and their associated *wetlands*, together with lands underlying them…." CCSMP, Ch. II, p.5 (emphasis added).

The SMA, as amended in 1995, defines "wetlands" as "areas that are inundated or saturated by surface water or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions." Also, the SMA term *wetlands* includes swamps, marshes, bogs and

similar areas. RCW 90.58.030(3)(h). However, SMA jurisdiction does not extend to all wetlands. For example, the SMA does not apply to smaller streams and lakes, or to shorelines on segments of streams upstream of a point where the mean annual flow is twenty cubic feet per second or less and on lakes less than twenty acres in size. RCW 90.58.030(2)(d).

[55]

The CCSMP defines "wetlands" as follows:

> "Wetlands" or "wetland areas" means those lands extending landward for two hundred feet in all directions as measured on a horizontal plane from the ordinary high water mark; and all marshes, bogs, swamps, floodways, river deltas, and *flood plains associated with the streams, lakes and tidal waters which are subject to the provisions of this chapter; the same to be designated as to location by the Department of Ecology.*

CCSMP Ch.II, p.6 (emphasis added). Thus, as is allowed by RCW 90.58.030(2)(f), Clark County has included the entire 100-year flood plain within its SMP. However, the CCSMP has also provided that both the designation and extent of flood plains and wetlands would be as designated by Ecology. Ecology's definition of "flood plain" is found in WAC 173-22-030(4), which equates the term "flood plain" with 'one hundred-year flood plain,' the term used by Federal Emergency Management Agency, in its administration of the National Flood Insurance Program. "Flood plain…The limit of this area shall be based upon flood ordinance regulation maps or a reasonable method which meets the objectives of the act." WAC 173-22-030(4). The one hundred-year flood plain is a commonly used and well-understood term with regard to the regulation of rivers. Also, as part of its flood insurance program, FEMA regularly updates its flood maps and makes them available to the public. 42 U.S.C. §4101(f) (revision and updating of flood plain areas maps) and (g) (making flood maps available). Thus we conclude that, when

Ecology used the term "one hundred-year flood plain," it referred to FEMA's flood plain designation.

[56]

Pursuant to RCW 90.58.030(2)(f), Ecology has promulgated rules to implement the designation of portions of a one-hundred year flood plain that are to be included in local master programs. The criteria containing the standards for Ecology's designation of stream areas that are associated with shorelines of the state and subject to the jurisdiction of the SMA are provided in WAC 173-22-040(3). A local government has discretion to include all or a larger portion of the one hundred-year flood plain within the associated shorelands. WAC 173-22-040(3)(b). This is consistent with the expressed intent of the SMA, which specifically allows a local jurisdiction to extend its shoreland jurisdiction up to the limit of the one-hundred-year flood plain. RCW 90.58.030(2)(f)(i). Clark County has chosen this option.

[57]

The area proposed for expansion of mining operations by respondent Storedahl is outside of the one hundred-year flood plain, as designated on the July 2002 FEMA updated flood plain map. Ex. RS-C 466. Appellants assert that a CUP is required for these operations and that Clark County's shoreline jurisdiction is more extensive than is provided for in the current SMA because of the CCMP's inclusion the term 'wetlands' in its definition of shorelines. But despite the use of the word 'wetland', the CCMP jurisdiction does not extend beyond the one hundred-year flood plain of the East Fork of the Lewis River. "Only those developments within the shorelines are subject to regulation by permits." *Weyerhaeuser v. King County*, 91 Wn.2d 721,

736, 592 P.2d 1108 (1979). Under both Ecology's regulations delineating SMA jurisdiction and Clark County's SMP, the area proposed by Storedahl for its mining operations lying outside the flood plain of the East Fork of the Lewis River is not within Clark County's shoreline jurisdiction. Therefore, a CUP is not required for the entirety of the site. We find that Petitioners have not met their burden with regard to issue (f).

Reporting Requirements

[58]

During the course of the hearing, Petitioners expressed concern over getting public access to various reports that are required of Storedahl. The Board believes that the scale of this project and its importance to the local community necessitates that certain information should be readily available from a single source to facilitate monitoring and understanding of the project. Consistent with Condition A-8 of the Hearings Examiner Final Order of November 4, 2004, which requires copies of all reports and documentation required under the terms of the HCP in connection with monitoring and evaluation measures to be provided to Clark County at the same time they are furnished to the Services, the Board finds that this information must be readily accessible from Clark County to the public.

ORDER

The motion by Cindy Morgan, et al., entitled "Shore Motion to Supplement the Record and Supplement Closing Argument" is DENIED.

The petition of Cindy Morgan, et al., is GRANTED with respect to the following:

Copies of all data, monitoring reports, correspondence and other information required to be reported in compliance with the Monitoring and Evaluation Measures contained in the HCP, including laboratory test results, shall be provided to Clark County. The County shall make all information provided to it available to the public in a public inspection file to which members of the public can have immediate access for purposes of viewing its contents and making photocopies. The County may charge an appropriate fee for photocopying to cover its actual costs.

The Conditional Use Permit is AMENDED to require Level II testing for TPH on all imported fill. The Permit is REMANDED to Ecology in order for Ecology to develop protocols to direct Storedahl on what procedures must be followed if a fill sample tests positively for TPH.

In all other respects, the petitions of Cindy Morgan et al., Friends of the East Fork, and Fish First are DENIED.

SO ORDERED this 6th day of January, 2006.

SHORELINES HEARINGS BOARD

BILL CLARKE, CHAIR

WILLIAM H. LYNCH, MEMBER

JUDY WILSON, MEMBER

JUDY BARBOUR, MEMBER

KEVIN RANKER, MEMBER